INF 280b// Team 5// Project Idea

Fall 2020

Our Team has decided to develop a Hotel Reservation Database System. The software should be able to efficiently store information about customers’ reservation (name, telephone, days reserved, etc.)

Some of the entities in our database system will be:

1. Hotel: hotel id, hotel branch, hotel location, etc;
2. Guest: first name, last name, SSN, phone, address, etc.;
3. Guest type: agency, group, individuals, etc.;
4. Rooms: room id, room number, availability; room description, etc.;
5. Rates: room id, check in/out, date, rate decimal, etc.;
6. Reservation: guest SSN, start/end date, room id, guest number, etc.;
7. Receptionist: employee id, name, phone, etc.;
8. Payment/Billing: payment id, payment amount, payment time, payment method, etc.,
9. Meal plan rates: meal plan id, plan description, plan price, etc.;  
   10. parking: reservation id, guest id, parking spot number, location,

So, some type of Guest reserves a Room at some Rate, making a Reservation with the Receptionist and Paying for the Reservation.

Of course we will have 1:1, 1:N and N:M relationships between the different entities:

* **1:1:**

**Rates / Rooms**. Every room has fixed price rate and every such rate belongs to a specific room type.

**Reservation/Payment.** One payment id per reservation and reservation can be paid for only once.

* **1:N:**

**Room / Reservation**. A room can be booked under one reservation but one reservation may keep several rooms.

**Guest / Room**. A guest can have many rooms reserved under one reservation, but a room belongs to a single guest for the period of time.

**Reservation / Receptionist**. The receptionist makes several reservations while on duty, but one reservation has only one receptionist.

N:M relationships will result in having some more relational tables:

* **N:M:**

**Reservation /Meal plan**. A reservation can have many meal plans for his stay and a meal plan can be the same for several reservations.

The system will have the perfect booking functionality for a regular hotel business.

RELATIONSHIPS

1. guest type - is a - guest

2. guest - makes - reservation

3. guest - reserves - room

4. receptionists - confirms - reservations

5. hotel - has - rooms

6. rates correspond with rooms

7. room gets reservations ?

8. meal plan corresponds to reservation

9. parking corresponds to reservation.

10. payment for reservation

1. Guest Type 1 (mandatory) to many (optional) Guest

2. Hotel 1 (mandatory) to many ( mandatory) Room

3. Rate 1 to 1 Room

4. Meal Plan 1 to 1 Reservation

5. Payment 1 to 1 Reservation

6. Receptionist 1 to Many (mandatory) Reservations

7. Guest 1 to 1 Reservation

8. Guest 1 to 1 Room